

rejection because there is no permissible motivation to combine the references as suggested by the Examiner.

First, there is no motivation to combine Ishikawa's plunger with the other cited references in the manner suggested by the Examiner. The Examiner asserts that the motivation for combining Ishikawa with Takahashi is that such would "enable the back pressure of the metering screw to be more freely adjustable as compared to conventional screw extruders".¹ But Ishikawa states that adjustment of the back pressure of the metering screw is accomplished by "making the screw to be movable in the axial direction".² That is, Ishikawa axially moves the screw between the positions shown in Figs. 3 and 4 in order to adjust the back pressure. Therefore, one of ordinary skill in the art following the teachings of Ishikawa would have been motivated to make the screw of Takahashi axially movable; he would not have been motivated to use a plunger, as suggested by the Examiner. Indeed, Ishikawa discloses that the reason for using a plunger is to sufficiently knead a resin "without causing resin leakage or the inflow of the resin into a mold".³ Therefore, because Takahashi does not require a mold, one of ordinary skill in the art would not have been motivated to incorporate Ishikawa's plunger therein.

Second, there is no motivation for combining Biffar with the other cited references in the manner suggested by the Examiner. The Examiner asserts that the motivation for combining Biffar with Takahashi is that such would "provide extrusion means that provide a simple way to discharge plastic without major temperature loss".⁴ But Biffar teaches that such an advantage is

¹ Office Action at page 5, last three lines and page 6, lines 1-2.

² Ishikawa at English Abstract, lines 1 and 2.

³ English translation of Ishikawa at page 2, lines 4-6, and page 3, lines 16-20. Note, an English translation of Ishikawa was provided to the PTO with the Amendment filed on March 11, 2002.

⁴ Office Action at page 6, lines 2-3.

provided by discharging plastic directly into a mold 7 from a heated feed line 3.⁵ Therefore, one of ordinary skill in the art following the teachings of Biffar would provide Takahashi with a heated feed line from the screw to the discharge nozzle; he would not have been motivated to provide Takahashi with a plunger, as suggested by the Examiner.

Third, the Examiner impermissibly uses the Applicants' own teachings against him. With respect to the above two arguments, the Examiner's asserted advantages do not provide motivation for combining the references as he suggests. The Examiner asserts that his stated motivations were only examples of the more general advantage that metering devices comprising screw extruders in combination with plungers provide more accurate metering of plastic resins as compared to conventional screw extruders.⁶ In the statement of the rejection itself, the Examiner repeats this bald assertion.⁷ However, the point Applicants emphasize is that what makes Ichikawa able to "enable the back pressure of the metering screw to be more freely adjustable" is that the screw itself moves back and forth; such advantage is not tied to the fact that Ichikawa uses a plunger. Similarly, Applicants emphasize that what makes Biffar able to "provide extrusion means that provide a simple way to discharge plastic without major temperature loss" is that he includes a heated feed line 3; not because he uses a plunger with the metering screw. Accordingly, the Examiner's asserted advantages are in no manner connected with the provision of a plunger in connection with the screw extruder. Therefore, how can these asserted motivations be examples of the advantages of providing a plunger with a screw extruder? Instead, the Examiner takes this motivation from Applicants' specification.

⁵ See the English translation of Biffar at: page 1, 4th to 6th paragraphs; page 3, 1st full paragraph; and page 3, last 3 lines. Note, an English translation of Biffar was provided to the PTO in an Amendment filed on March 11, 2002.

⁶ Office Action at page 6, lines 4-6.

⁷ Office Action at page 3, lines 8-13.

It is Applicants who disclose the drawbacks of using a screw extruder in connection with a method for forming a resinous frame. And it is Applicants who disclose the solution to that problem. That is, Applicants disclose the problems of using a conventional screw extruder stem from the required change in moving speed of a glass sheet, when a resinous bead is applied at the corners. At the corners, the sheet moves more slowly with respect to the apparatus applying the resinous bead. Accordingly, the amount of resinous material to be applied in the corners must be reduced.⁸ In the past, attempts were made to solve the problem by changing the rotational speed of the metering screw.⁹ However, the problem with such a strategy is that the rotational speed of the metering screw cannot be changed instantaneously and, therefore, the output from the extruder only gradually changes. And the change is not quick enough to keep the bead uniform at the corners.¹⁰ In order to solve this problem, it is Applicants who have discovered that by using a plunger in connection with the metering screw, a uniform resinous bead can be applied to a sheet of glass even at corners.¹¹

Thus, the Examiner's asserted motivation of the increased accuracy of metering screws with plungers appears to have been taken directly from Applicants' specification. This the Examiner cannot do. Accordingly, Applicants respectfully request that if the Examiner persists in maintaining this rejection, he also come forward with evidence in the prior art teaching the advantages of using a plunger with a metering screw when forming a resinous bead on a sheet of glass.

⁸ Specification at paragraph bridging pages 2 and 3, and page 4 line 4 - page 5, line 7.

⁹ Specification at page 5, lines 8-26.

¹⁰ Specification at page 5, line 27 - page 6, line 18.

¹¹ Specification at page 12, line 6 - page 15, line 18.

Fourth, the Examiner impermissibly picks and chooses elements from the prior art, by using the claims as a guide, to reconstruct the Applicants' invention. But it is not obvious to do so.¹² That is, the Examiner asserts "it would have been obvious to one of ordinary skill in the art to employ an extruder having a metering screw and plunger for the extruder as disclosed by Takahashi because extruding apparatuses having a metering screw and plunger are known as evidenced by Ichikawa and Biffar."¹³ However, Applicants do not claim to have invented a machine or method for applying a resinous bead to a sheet of glass. Similarly, Applicants do not claim to have invented a metering screw with a plunger. Instead, Applicants have claimed to discover the advantage of using the two elements in combination.

But most if not all inventions arise from a combination of old elements.¹⁴ Thus, every element of a claimed invention may often be found in the prior art.¹⁵ However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *Id.* Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant.¹⁶

¹² *Ex Parte Clapp*, 227 USPQ 972 (Bd. Pat. App. & Interf. 1985). See also: *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ.2d 1780, 1784 (Fed. Cir. 1992)(citing *In re Gorman*, 933 F.2d 982, 987, 18 USPQ.2d 1885, 1888 (Fed. Cir. 1991) ("It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious.")).

¹³ Office Action at page 3, lines 4-8.

¹⁴ *In re Kotzab*, 55 USPQ2d at 1316 (citing *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998).

¹⁵ *Id.*

¹⁶ *In re Kotzab*, 55 USPQ2d at 1316 (citing *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); and *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)).

"Although the suggestion to combine references may flow from the nature of the problem, 'defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness.'"¹⁷ Therefore, "when determining the patentability of a claimed invention which combines two known elements, the question is whether there is something in the prior art as a whole to suggest the desirability, and thus obviousness, of making the combination."¹⁸ Here, as discussed above, there is not. Instead, Takashi discloses a method for preparing a panel with a resinous frame, and Ishikawa separately teaches the use of a metering screw wherein the screw is able to move in the axial direction (and also happens to include a plunger). Additionally, Biffar separately discloses the use of a heated feed line with a metering screw (and also happens to include a plunger).

For at least any one of the above reasons, this rejection is believed to be in error, and should be withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

¹⁷ *Ecolochem, Inc. v. Southern California Edison Co.*, 56 USPQ2d 1065 (Fed. Cir. 2000) (*citing Monarch Knitting Mach. Corp. v. Sulzer Morat Gmbh*, 139 F.3d 877, 880, 45 USPQ2d 1977, 1981 (Fed. Cir. 1998)).

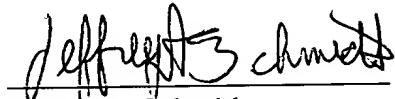
¹⁸ *Id.* at 1073 (*citing In re Beattie*, 974 F.2d 1309, 1311-12, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992)).

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Respectfully submitted,



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